Claims:

1. A method of classifying a digital image, said method comprising the steps of:
providing a region adjacency graph representing the digital image; and
analysing said region adjacency graph for predetermined patterns and for each identified pattern selecting a classification of said digital image.

2. The method according to claim 1, wherein said region adjacency graph is classified as one of a plurality of stereotypes.

3. The method according to claim 2, wherein a stereotype is assigned to a region adjacency graph on the basis of a size of one or more regions of said digital image.

4. The method according to any one of claim 3, wherein a stereotype is assigned to a region adjacency graph on the basis of an adjacency of said regions.

5. The method according to anyone of claim 4, wherein a stereotype is assigned to a region adjacency graph on the basis of its semantic label content.

6. The method according to anyone of claim 4, wherein a stereotype is assigned to a region adjacency graph on the basis of a mean colour of one or more regions.

7. The method according to anyone of claim 6, wherein said plurality of stereotypes are stored in an association look up table.

8. The method according to claim 6, wherein said stereotypes are represented in a hierarchal arrangement.

9. The method according to claim 7, wherein each of said stereotypes has a hierarchical path.

10. The method according to claim 1, wherein said region adjacency graph is provided by analysing contextual data associated with one or more regions of said digital image.

11. The method according to claim 10, wherein said contextual data comprises information generated by one or more separate sources of said information.

12. The method according to claim 11, wherein a corresponding portion of said contextual data is obtained from a temporal region of interest for each source of said information.

13. The method according to claim 12, further comprising the step of providing metadata associated with said digital image, wherein said metadata includes said stereotypes of said digital image.

14. The method according to claim 13, wherein said metadata includes a hierarchical path associated with said respective stereotype of each digital image.

15. The method according to claim 14, wherein said hierarchical path is stored with a respective stereotype as a metadata object which is associated with a respective image object.

16. The method according to claim 14, wherein said hierarchical path is stored as a referenced lookup table.

17. The method according to claim 1, wherein said digital image is stored in a database of digital images and wherein said classification can be used to retrieve said digital image from said database.

18. An apparatus for classifying a digital image, said apparatus comprising:

providing means for providing a region adjacency graph representing the digital image; and

analysing means for analysing said region adjacency graph for predetermined patterns and for each identified pattern selecting a classification of said digital image.

19. The apparatus according to claim 18, wherein said region adjacency graph is classified as one of a plurality of stereotypes.

20. The apparatus according to claim 19, wherein a stereotype is assigned to a region adjacency graph on the basis of a size of one or more regions of said digital image.

21. The apparatus according to claim 20, wherein a stereotype is assigned to a region adjacency graph on the basis of an adjacency of said regions.

22. The apparatus according to claim 21, wherein a stereotype is assigned to a region adjacency graph on the basis of its semantic label content.

23. The apparatus according to claim 21, wherein a stereotype is assigned to a region adjacency graph on the basis of a mean colour of one or more regions.

24. The apparatus according to claim 23, wherein said plurality of stereotypes are stored in an association lookup table.

25. The apparatus according to claim 23, wherein said stereotypes are represented in a hierarchal arrangement.

26. The apparatus according to claim 24, wherein each of said stereotypes has a hierarchical path.

27. The apparatus according to claim 26, wherein said region adjacency graph is provided by analysing contextual data associated with one or more regions of said digital image.

28. The apparatus according to claim 27, wherein said contextual data comprises information generated by one or more separate sources of said information.

29. The apparatus according to claim 28, wherein a corresponding portion of said contextual data is obtained from a temporal region of interest for each source of said information.

30. The apparatus according to claim 29, further comprising metadata providing means for providing metadata associated with each digital image, wherein said metadata includes said stereotypes of each digital image.

31. The apparatus according to claim 30, wherein said metadata includes a hierarchical path associated with said respective stereotype of each digital image.

32. The apparatus according to claim 31, wherein said hierarchical path is stored with a respective stereotype as a metadata object which is associated with a respective image object.

33. The apparatus according to claim 31, wherein said hierarchical path is stored as a referenced lookup table.

34. The apparatus according to claim 33, wherein said digital image is stored in a database of digital images and wherein said classification can be used to retrieve said digital image from said database.

35. A computer program product comprising a computer readable medium having a computer program recorded for classifying a digital image, said computer program product comprising:

providing module for providing a region adjacency graph representing the digital image; and

analysing module for analysing said region adjacency graph for predetermined patterns and for each identified pattern selecting a classification of said digital image.

36. The computer program product according to claim 35, wherein said region adjacency graph is classified as one of a plurality of stereotypes.

37. The computer program product according to claim 36, wherein a stereotype is assigned to a region adjacency graph on the basis of a size of one or more regions of said digital image.

38. The computer program product according to claim 37, wherein a stereotype is assigned to a region adjacency graph on the basis of an adjacency of said regions.

39. The computer program product according to claim 38, wherein a stereotype is assigned to a region adjacency graph on the basis of its semantic label content.

40. The computer program product according to claim 38, wherein a stereotype is assigned to a region adjacency graph on the basis of a mean colour of one or more regions.

41. The computer program product according to claim 40, wherein said plurality of stereotypes are stored in an association lookup table.

42. The computer program product according to claim 41, wherein said stereotypes are represented in a hierarchal arrangement.

43. The computer program product according to claim 42, wherein each of said stereotypes has a hierarchical path.

44. The computer program product according to claim 43, wherein said region adjacency graph is provided by analysing contextual data associated with one or more regions of said digital image.

45. The computer program product according to claim 44, wherein said contextual data comprises information generated by one or more separate sources of said information.

46. The computer program product according to claim 45, wherein a corresponding portion of said contextual data is obtained from a temporal region of interest for each source of said information.

47. The computer program product according to claim 46, further comprising a metadata providing module for providing metadata associated with each digital image, wherein said metadata includes said stereotypes of each digital image.

48. The computer program product according to claim 47, wherein said metadata includes a hierarchical path associated with said respective stereotype of each digital image.

49. The computer program product according to claim 48, wherein said hierarchical path is stored with a respective stereotype as a metadata object which is associated with a respective image object.

50. The computer program product according to claim 48, wherein said hierarchical path is stored as a referenced lookup table.

51. The computer program product according to claim 50, wherein said digital image is stored in a database of digital images and wherein said classification can be used to retrieve said digital image from said database.

52. A method of classifying a digital image signal, said method comprising the steps of:

providing a labelled region adjacency grpah representing at least part of the digital image signal;

providing a plurality of classifications, for each of a plurality of patterns, wherein each said pattern comprises:

(i) a set of labelled regions; or

(ii) a set of labelled regions and corresponding adjacency information;

analysing said labelled region adjacency graph for the presence of predetermined patterns; and

for each pattern identified, selecting from said plurality of classifications a classification for the digital image.

53. The method according to claim 52, wherein said digital image signal is classified as one or more of a plurality of stereotypes.

54. The method according to claim 53, wherein a stereotype is assigned to the digital image signal on the basis of the semantic label content of one or more regions in the labelled region adjacency graph.

55. The method according to claim 53, wherein a stereotype is assigned to the digital image signal on the basis of the adjacency of a set of regions with specified labels in the labelled region adjacency graph.

56. The method according to claim 53, wherein a stereotype is assigned to the digital image signal on the basis of the size of one or more regions with a specified label in the labelled region adjacency graph.

57. The method according to claim 53, wherein a stereotype is assigned to the digital image signal on the basis of a label which represents the mean colour of one or more regions in the labelled region adjacency graph.

58. The method according to claim 53, wherein a stereotype is assigned to the digital image signal on the basis of a label which represents the mean colour texture of one or more regions in the labelled region adjacency graph.

59. The method according to claim 58, wherein said plurality of stereotypes are stored in an association lookup table.

60. The method according to claim 59, wherein said stereotypes are represented in an hierarchical arrangement.

61. The method according to claim 60, wherein each of said stereotypes has a hierarchical path.

62. The method according to claims 61, wherein each of said stereotypes is represented by one of a plurality of icons.

63. The method according to claims 62, where said digital image is stored in a database of digital images and wherein said digital image can be retrieved from said database using a keyword representing a stereotype.

64. The method according to claim 62, where said digital image is stored in a database of digital images and wherein said digital image can be retrieved from said database using an icon representing a stereotype.

65. The method according to claim 62, where said digital image is stored in a database of digital images and wherein said digital image can be retrieved from said database using either a keyword or icon representing a generalisation, or broader version, of a stereotype.

66. An apparatus for classifying a digital image signal, said apparatus comprising:

region adjacency graph providing means for providing a labelled region adjacency graph representing at least part of the digital image signal;

classification providing means for providing a plurality of classifications, for each of a plurality of patterns, wherein each said pattern comprises:

(i) a set of labelled regions; or

(ii) a set of labelled regions and corresponding adjacency information; and

analysing means for analysing said labelled region adjacency graph for the presence of predetermined patterns, wherein for each pattern identified, said classification providing means provides a classification for the digital image selecting from said plurality of classifications.

67. The apparatus according to claim 66, wherein said digital image signal is classified as one or more of a plurality of stereotypes.

68. The apparatus according to claim 67, wherein a stereotype is assigned to the digital image signal on the basis of the semantic label content of one or more regions in the labelled region adjacency graph.

69. The apparatus according to claim 67, wherein a stereotype is assigned to the digital image signal on the basis of the adjacency of a set of regions with specified labels in the labelled region adjacency graph.

70. The apparatus according to claim 67, wherein a stereotype is assigned to the digital image signal on the basis of the size of one or more regions with a specified label in the labelled region adjacency graph.

71. The apparatus according to claim 67, wherein a stereotype is assigned to the digital image signal on the basis of a label which represents the mean colour of one or more regions in the labelled region adjacency graph.

72. The apparatus according to claim 67, wherein a stereotype is assigned to the digital image signal on the basis of a label which represents the mean colour texture of one or more regions in the labelled region adjacency graph.

73. The apparatus according to claim 72, wherein said plurality of stereotypes are stored in an association lookup table.

74. The apparatus according to claim 73, wherein said stereotypes are represented in an hierarchical arrangement.

75. The apparatus according to claim 74, wherein each of said stereotypes has a hierarchical path.

76. The apparatus according to claim 75, wherein each of said stereotypes is represented by one of a plurality of icons.

77. The apparatus according to claim 76, where said digital image is stored in a database of digital images and wherein said digital image can be retrieved from said database using a keyword representing a stereotype.

78. The apparatus according to claim 76, where said digital image is stored in a database of digital images and wherein said digital image can be retrieved from said database using a icon representing a stereotype.

79. The apparatus according to claim 76, where said digital image is stored in a database of digital images and wherein said image can be retrieved from said database using either a keyword or icon representing a generalisation, or broader version, of a stereotype.

80. A computer program product comprising a computer readable medium having a computer program recorded for classifying a digital image signal, said computer program product comprising:

region adjacency graph providing module for providing a labelled region adjacency graph representing at least part of the digital image signal;

classification providing module for providing a plurality of classifications, for each of a plurality of patterns, wherein each said pattern comprises:

(i) a set of labelled regions; or

(ii) a set of labelled regions and corresponding adjacency information; and

analysing module for analysing said labelled region adjacency graph for the presence of predetermined patterns, wherein for each pattern identified, said classification providing module provides a classification for the digital image selecting from said plurality of classifications.

81. The computer program product according to claim 80, wherein said digital image signal is classified as one or more of a plurality of stereotypes.

82. The computer program product according to claim 81, wherein a stereotype is assigned to the digital image signal on the basis of the semantic label content of one or more regions in the labelled region adjacency graph.

83. The computer program product according to claim 81, wherein a stereotype is assigned to the digital image signal on the basis of the adjacency of a set of regions with specified labels in the labelled region adjacency graph.

84. The computer program product according to claim 81, wherein a stereotype is assigned to the digital image signal on the basis of the size of one or more regions with a specified label in the labelled region adjacency graph.

85. The computer program product according to claim 81, wherein a stereotype is assigned to the digital image signal on the basis of a label which represents the mean colour of one or more regions in the labelled region adjacency graph.

86. The computer program product according to claim 81, wherein a stereotype is assigned to the digital image signal on the basis of a label which represents the mean colour texture of one or more regions in the labelled region adjacency graph.

87. The computer program product according to claim 86, wherein said plurality of stereotypes are stored in an association lookup table.

88. The computer program product according to claim 87, wherein said stereotypes are represented in an hierarchical arrangement.

89. The computer program product according to claim 88, wherein each of said stereotypes has a hierarchical path.

90. The computer program product according to claim 81, wherein each of said stereotypes is represented by one of a plurality of icons.

91. The computer program product according to claim 90, wherein said digital image is stored in a database of digital images and wherein said digital image can be retrieved using a keyword representing a stereotype.

92. The computer program product according to claim 90, wherein said digital image is stored in a database of digital images and wherein said digital image can be retrieved using a icon representing a stereotype.

93. The computer program product according to claim 90, wherein said digital image is stored in a database of digital images and wherein said digital image can be retrieved from said database using either a keyword or icon representing a generalisation, or broader version, of a stereotype.